

TEXT LISTING

068-000448-02

PROGRAM

MICRO-NOVA I/O TESTER DIAGNOSTIC

TEXT TAPE

097-000448-02

ABSTRACT

THIS DIAGNOSTIC IS DESIGNED TO TEST THE MICRO-NOVA I/O TESTER BOARD, A SPECIAL PURPOSE I/O EXERCISER FOR THE MICRO_NOVA DATA CHANNEL.

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07 ; DESCRIPTION: MICRO-NOVA I/O TESTER DIAGNOSTIC
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10 ; REVISION HISTORY:
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12 ;     REV.          DATE
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14 ;     00           11/15/76
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16 ;     02           09/17/79          UPDATE DIRT BLOCK
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04 1. ABSTRACT

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06 THIS DIAGNOSTIC IS DESIGNED TO TEST THE MICRO-NOVA
07 I/O TESTER BOARD, A SPECIAL PURPOSE I/O EXERCISER FOR
08 THE MICRO-NOVA DATA CHANNEL.
09

10 2. MACHINE REQUIREMENTS

- 11
12 2.1 A MICRO-NOVA PROCESSOR
13 2.2 4K OF READ/WRITE MEMORY
14 2.3 A MICRO-NOVA I/O TESTER BOARD
15 2.4 SOME MEANS OF REPORTING ERRORS
16

17 3. OPERATING PROCEDURE

18
19 PROGRAM MAY BE LOADED VIA THE BINARY LOADER OR THE DTOS
20 SYSTEM AND WILL START AT LOCATION 200. IF IT'S
21 DESIRED, "SWREG" OPTIONS MAY BE CHANGED AT
22 THIS TIME THROUGH THE HAND-HELD CONSOLE OR THE CONSOLE
23 DEBUG OPTION, OR AT ANY TIME THROUGH THE TTY SWITCH PAK.
24

25 4. ERROR DESCRIPTION

26
27 THIS PROGRAM IS DESIGNED TO PROVIDE A SNAPSHOT OF ALL
28 REGISTER CONTENTS IF AN ERROR IS DETECTED. THESE ARE
29 SAVED IN A MEMORY STACK AND, DEPENDING ON THE "SWREG"
30 OPTIONS, REPORTED TO THE USER VIA SOME LISTING OUTPUT
31 DEVICE. A RUNNING COUNT OF ERRORS IS ALSO SAVED BY
32 THE PROGRAM, AND FACILITIES ARE PROVIDED FOR LOOPING
33 OR HALTING ON ERROR DETECTION. IF THE PROGRAM HAS
34 HALTED ON ERROR, THE PC AND CARRY AND THE CONTENTS OF ALL
35 REGISTERS AT THE TIME OF THE ERROR HAVE BEEN SAVED ON
36 THE SYSTEM STACK. THE LOCATION POINTED TO BY THE STACK
37 POINTER CONTAINS THE PC & CARRY, SP-1 IS AC3, SP-2 IS
38 AC2, SP-3 IS AC1, AND SP-4 IS AC0. ADDITIONAL INFORMATION
39 IS AVAILABLE IN SEVERAL PAGE 0 LOCATIONS AS FOLLOWS:
40

41 LOCATION (OCTAL)	42 VARIABLE	43 INTERPRETATION
44 00201	45 HEL?P	46 CURRENT SUBTEST START
47 00203	48 PAS?S	49 TEST PASS COUNTER
50 00207	51 INTV?	52 SUBTEST LOGOUT INTVL
53 00210	54 ERC?T	55 TOTAL ERROR COUNT
56 00211	57 ITR?R	58 SUBTEST ERROR SWITCH
59 00212	60 TSN?M	CURRENT SUBTEST NUMBER
61 00213	ERN?M	LATEST ERROR NUMBER

51 DETAILED ERROR MESSAGES PRINT OUT THE REGISTER
52 CONTENTS AT THE TIME OF THE FAILURE, AS WELL AS
53 IDENTIFYING THE SUBTEST AND ERROR NUMBER CAUSING
54 THE PROBLEM. THE MESSAGE FORMAT IS:
55

56 ERROR NUMBER XXX ENCOUNTERED SUBTEST XX
57 CRY AC0 AC1 AC2 AC3 PC
58 X XXXXXX XXXXXX XXXXXX XXXXXX XXXXXX
59

60 THESE REGISTER CONTENTS SHOULD BE COMPARED TO THOSE

DESIRED BY THE FAILING SUBTEST TO ISOLATE THE ERROR.

5. SWITCH SETTINGS

LOCATION "SWREG" IS USED TO SELECT THE PROGRAM OPTIONS (NOT SYSTEM CONFIGURATION). WHILE RUNNING UNDER DTOS THIS LOCATION WILL BE LOADED BY THE MONITOR, HOWEVER UNDER STAND-ALONE AND PROGRAM LOAD MODES THIS LOCATION MAY BE SET BY THE USER USING EITHER THE HAND-HELD CONSOLE OR A TELETYPE WITH THE CONSOLE DEBUG FEATURE, OR THE SWITCH PACKAGE.

5.1 SWITCH OPTIONS

DIFFERENT BITS AND THEIR INTERPRETATION AT LOCATION "SWREG" ARE AS FOLLOWS:

BIT	OCTAL	BINARY	INTERPRETATION
1		0	LOOP ON ERROR
	40000	1	SKIP LOOPING ON ERROR
2		0	PRINT TO CONSOLE
	20000	1	ABORT CONSOLE PRINTOUT
3		0	DO NOT PRINT % FAILURE
	10000	1	PRINT % FAILURE RATE
4		0	ALLOW END OF PASS PRINT
	04000	1	SUPPRESS PASS PRINTOUT
5		0	DON'T USE LINE PRINTER
	02000	1	USE LINE PRINTER
6		0	DON'T HALT ON ERROR
	01000	1	HALT ON ERROR
7		0	DON'T PRINT SUBTEST COMPLETION
	00400	1	PRINT SUBTEST COMPLETION EACH INTVL AND ERROR SUMMARY REPORT WHEN FIRST SWITCHED ON.
8		0	PRINT DETAILED ERROR ONLY ONCE
	00200	1	ALWAYS PRINT DETAILED ERROR MESSAGE
9-11			RESERVED FOR FUTURE DTOS USE
12-15			RESERVED FOR FUTURE USER OPTIONS

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**00000 TOTAL ERRORS, 00000 FIRST PASS ERRORS